
Targeting Language Support for Non-Native English-Speaking Graduate Students at a Canadian University

Liying Cheng, Johanna Myles, and Andy Curtis

Universities and colleges in Canada and other English-speaking countries have become increasingly concerned with linguistic and cultural diversity and internationalizing their campuses, both to enhance local and international students' experiences on campus and to prepare them to function in their careers and the larger society. Most international students are non-native English-speaking (NNEST) and need support to develop the English language proficiency required for engagement in the academic demands of the Canadian university milieu. This small-scale study at a Canadian university, by way of a survey and follow-up interview, addresses the gap in our understanding between academic skills that are required at the graduate level and those that learners of English find difficult. The findings suggest that by targeting academic skills that are both required and difficult, efficiency can be achieved in the design of programmatic supports for developing English for academic purposes (EAP). The findings further suggest that international students may lack independent strategies for advancing their English-language proficiency and that these too can be targeted in an EAP program.

Les universités et les collèges au Canada et dans d'autres pays anglophones se préoccupent davantage de la diversité linguistique et culturelle et internationalisent leurs campus, tant pour rehausser l'expérience des étudiants canadiens et étrangers que pour les préparer à bien intégrer leurs carrières et fonctionner dans la société globale. L'anglais n'étant pas la langue maternelle de la majorité des étudiants étrangers, ceux-ci ont besoin d'appui pour développer leurs compétences en anglais de sorte à être à la hauteur des exigences académiques des universités canadiennes. Cette étude à petite échelle repose sur une enquête suivie d'entrevues effectuées à une université canadienne. Elle porte sur l'écart entre notre compréhension des habiletés académiques que doivent manifester les étudiants des deuxième et troisième cycles d'une part, et celles qui posent des problèmes pour les apprenants d'anglais d'autre part. Les résultats indiquent que, pour être efficace, la conception d'appuis programmatiques pour le développement de l'anglais à des fins académiques (EAP) devrait viser des habiletés académiques à la fois difficiles et requises. De plus, il semblerait que les étudiants étrangers ne disposent pas de stratégies indépendantes pour développer leur

Introduction

Over the last decade, there has been increased participation of international students in universities across Canada and other English speaking countries. The vast majority of these students are non-native English speakers (NNES). Universities have long recognized that these learners will find the demands of academic work challenging. The research response has generally involved surveys of faculty, and analysis of textbooks and course outlines, for example, to document the academic language skills requirements of university course work. English for academic purposes (EAP) programs were often predicated on the belief that these required skills should inform syllabus design. The productive skills of academic speaking (e.g., leading a seminar discussion) and writing (e.g., related to reporting on research) are typical examples of skills targeted in EAP programs.

This study examines the consistency between the academic skills required for engagement with the demands of course work at the graduate level, and the skills that NNES students find difficult. The central research questions that frame this study are as follows.

1. Which academic language skills are seen by (international) students to be important (required)?
2. Which academic language skills are seen by them to be difficult?
3. How can the findings about skills perceived to be both important and difficult be used to reform EAP syllabus design?

Fifty-nine graduate students completed a survey instrument designed to tap the central research questions. They were asked to rank-order 31 academic skills, first for importance to their academic success, and then for their perceived difficulty. Twelve of these students participated in a follow-up semistructured interview where they were asked to reflect and elaborate on the linguistic and academic demands of their area of specialization.

This article is organized as follows. We begin by providing background information and a theoretical framework for the study. We then describe the methodology: the participants, the design of the survey instrument, and the interview strategy. Next we present and discuss the results of both the survey and the interviews. We conclude with suggestions for curriculum realignment and enhancement to reflect the consistency noted between academic skills perceived by these international students to be important and difficult; and lost opportunities for incidental and independent acquisition of English due to the inadequacy of reported independent learning strategies.

Background

Curriculum development and teaching practices in EAP or English for specific purposes (ESP) have been driven by the particular learning and language skills required by identified groups of NNES students in specific sociocultural contexts (Johns & Price-Machado, 2001). In an academic setting, increasing our awareness of students' general English language usage, communication requirements, and perceived difficulties in their respective fields of study has implications for curriculum development of both language programs (Flowerdew & Peacock, 2001; Hutchinson & Waters, 1987; Stoller, 2001) and other university support services for international students (Heikinheimo & Shute, 1986; Zimmermann, 1995). Recognizing that the language-related skills of educators/administrators and students generally vary across instructional contexts and time, administering regular assessments of the perceived importance and difficulty of such skills is essential for any educational institution in order to provide ongoing, carefully targeted language support.

One approach to providing such support has been needs analysis, which has taken various forms in EAP settings. Through the use of questionnaires, interviews, and observations, a needs analysis is a systematic way of profiling language skills and abilities, prioritizing needs, and clarifying the communication events in which the learners participate (Jordan, 1997). Researchers can consult faculty about their course requirements and expectations (Eblen, 1983; Bridgeman & Carlson, 1984; Casanave & Hubbard, 1992; Ferris & Tagg, 1996a, 1996b; Johns, 1981) and about the communication experiences of NNES international students (Samuelowicz, 1987; Trice, 1999; Xu, 1991). Studies have also been conducted based on collecting and classifying assignments from various faculties and departments (Braine, 1995; Hartill, 2000; Horowitz, 1986; Rose, 1983; Herrington, 1985); observing the language and behavioral demands of students in classroom contexts (McKenna, 1987); and surveying students on their backgrounds, goals, and academic adjustment (Frodesen, 1995; Ramsey, Barker, & Jones, 1999; Tarone, 1989). More recently, it has been common to apply a combination of methods *in situ* to gain a more holistic perspective. This involves using ethnography and longitudinal case studies in order to gain a deeper understanding of the *emic* (insider) experiences of students, which focus on, for example, the strategies they use to complete assignments and their learning processes over time (Casanave, 2002; Guen, 2000; Holliday, 1995; Prior, 1998). By determining the specific communicative and linguistic language skills required by NNES students in their respective programs of study, EAP and ESP support can be targeted accordingly (Benesch, 1996; Cheng, 1996; Johns & Price-Machado, 2001). In this way, teachers will be able to prepare students more effectively for the demands required of them in subject-matter class-

rooms (Flowerdew & Peacock, 2001; Jordan, 1997). In turn, students, especially at the graduate level, will be able to inform the support systems created to help them.

A fairly limited number of studies on the perceived academic and linguistic skills required by NNES graduate students have been carried out at Canadian universities (Berman & Cheng, 2001; Chacon, 1998; Sun, 1987; Zhao, 1993) compared with other teaching and learning contexts reviewed above. A search of the past six issues of the *Journal of English for Academic Purposes* (a specialized international journal in the field), revealed only two studies conducted in the context of Canadian universities including one article derived from the same study. A search of the past six issues of the *TESL Canada Journal* showed one study published in the area. Nevertheless, in Sun's (1987) research with Chinese graduate students and visiting scholars, the graduate students were most concerned with overall command of academic and research-oriented English, especially for writing, whereas the visiting scholars gave priority to oral communication and obtaining information. Two studies at the University of Alberta revealed that speaking and writing were found to be the main challenges for international students (Berman & Cheng, 2001; Chacon, 1998). Berman and Cheng also reported that for graduate students, there was a significant relationship between perceived language difficulties, especially in speaking and writing, and their academic performance as revealed by their GPAs. However, studies on the ability of language proficiency to predict academic success have been inconclusive and somewhat contradictory (Bers, 1994; Graham, 1987; May & Bartlett, 1995; Patkowski, Fox & Smodlaka, 1997; Vinke & Jochems, 1993). It is possible, therefore, that students' perceptions of their proficiency and of the relative importance of certain language skills to their academic studies may be at least as important as any test score in predicting success and providing support.

Whether it is understanding their instructors, taking part in large- and small-group discussions, or writing academic papers and reports, NNES graduate students can experience a great deal of stress in their studies and in their daily lives. Given the limited number of studies addressing the language and learning experiences of these students, we felt that it would be a valuable exercise to explore their needs more fully. As a result, we chose to investigate the perceived linguistic and academic challenges that NNES graduate students have experienced at one Canadian university. The more research conducted with regard to English-language requirements and difficulties, the better equipped and informed universities will be to offer EAP programs or discipline-specific study and academic courses that enable NNES students to develop their skills.

Methodology

The university where we conducted this study has a growing international population: 1,174 international students from 92 countries were enrolled in 1999-2000, an increase of 16.9% over the previous year. Of the 1,174 international students who are studying at the university, 243 were registered at the graduate level, an increase of 19.7% over 1998-1999 in international graduate student enrollments. These students accounted for 14.1% of the total number of full-time graduate/professional students registered at the university during the 1999-2000 academic year: almost all are NNES with a few exceptions from other English-speaking countries. Graduate students were chosen for this study so that we could pinpoint the issues of this particular group who had already had some years of experience working in their own countries and were mature in terms of their linguistic, social, and cultural development.

In order to explore the perceived linguistic and cultural challenges of NNES graduate students, we adopted an approach using a survey questionnaire and follow-up interviews. The questionnaire provided a tool to determine the language skills that are required in their academic studies and the skills by which they feel particularly challenged. In the follow-up interviews, students had the opportunity to discuss more deeply the same issues presented in the questionnaire and also to talk about their experiences in their own words. The interviews also focused on the social and cultural adaptations of this group of students, which was discovered to be of equal importance to the students' success. This part of the data is reported in a separate paper (Myles & Cheng, 2003). Two research questions were explored and are discussed in this article:

- Which language skills in terms of listening, reading, speaking, and writing for academic purposes are perceived to be important and perceived to be difficult by NNES graduate students in their academic study at this Canadian university?
- How can this kind of feedback be used to design English-language courses best suited to develop the perceived language competences in the most important/difficult language skills?

Material

The questionnaire consisted of two major parts: the first focused on language skills, and the second on students' demographic and academic information. The first part invited students to self-assess both the importance and difficulty of 31 English-language-based study skills relevant to their academic study in the areas of listening, reading, speaking, and writing (see Appendix). These 31 language skills were identified from previous EAP and ESP research studies. The four major language constructs in listening, reading, speaking, and writing were subdivided into academic tasks and study skills

so that targeted language support for these NNES graduate students could be developed based on this information. The questionnaire was based on a 5-point Likert scale. The importance scale ranged from 1=not important, through 3=somewhat important, to 5=very important. The difficulty scale ranged from 1=not difficult, through 3=somewhat difficult, to 5=very difficult. The second section of the questionnaire asked for information regarding students' sex, their number of years in English-speaking countries, their departments and faculties, their first languages, and other information about their academic studies at the university.

The format of the interviews was designed to tap into the experiences and perceptions of these students in detail after we had obtained data from the initial survey. The structure we used followed what Patton (2002) categorizes as the general interview guide. The interview questions served as guidelines for what became open-ended conversations, which also allowed us to explore ideas and angles not anticipated in the original plan, and which therefore could not be obtained via the survey, but rather emerged during the interaction between interviewer and interviewee.

Participants and Procedures

The participants in the study were international and new immigrant NNES students completing graduate degrees at this Canadian university at the time of the study (2000-2001 academic year). The questionnaires were distributed with the help of graduate coordinators in each department/faculty via internal mail and were completed by graduate students in their own time. Two self-addressed envelopes were included with each questionnaire so that students could return their consent form and questionnaire separately in order to maintain anonymity. Of the 254 surveys mailed out, 59 graduate students replied (a return rate of 23%). Among the 59 students who replied, 26 (44%) indicated in the questionnaire that they would agree to be interviewed. Based on availability of the participants during the time of the research (3 months after the survey), 12 of the 26 students were available to be interviewed.

The survey data were analyzed using SPSS to obtain descriptive statistics in terms of importance and difficulty of the language skills perceived by these graduate students. The interviews were conducted in an informal setting and were audiotaped with the students' consent. The interviews ranged from one hour to one and a half hours in length, during which time the students were invited to reflect on their language experiences in relation to their academic tasks and duties in their area of study. The interviews were transcribed verbatim so that recurring patterns and themes could be extracted from the data.

Results and Discussion

The Questionnaire

Demographic details

In terms of gender, a balanced group of graduate students responded to the survey, with 55.9% being male and 44.1% female. About half the respondents (50.8%) had spent one to two years in an English-speaking country, with 28.9% having spent three to five years, and 15.3% 6-10 years. There was a spread of graduate students from all five divisions at the university, with the majority in engineering and applied sciences (35.6%) and mathematics and physical sciences (20.3%); of the remainder 13.6% were from life sciences, 15.3% from humanities, and 11.8 % from social sciences and professional schools. The respondents came from 17 language backgrounds, and 38.9% spoke Chinese as their first language. Romanian came second (10.1%) followed by Arabic and French both at 6.8%, Spanish 5.1 %, Bulgarian, Japanese, German, Polish, and Russian 3.4% respectively. The rest (11.9%) of the respondents represented 1 student from each of the following language backgrounds: Hindi, Modern Greek, Persian (Farsi), Serbian, Swahili, Tamil, and Turkish, with 3.4% missing data for this aspect.

Table 1
Most to Least Important Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
S—23. Leading class discussions	59	4.81	6.86
L—2. Understanding instructions of your professors	59	4.78	0.93
R- 8. Understanding the main points of a text	59	4.75	0.94
L—1. Understanding lectures/seminars	59	4.71	0.93
S—20. Giving talks, seminars or presentations	59	4.66	1.08
R—12. Understanding academic textbooks	59	4.66	1.11
R—14. Understanding research reports	59	4.61	1.31
R—11. Understanding vocabulary in your subject area	59	4.52	1.04
W—25. Writing short reports (1-5 pages)	59	4.51	1.24
R—9. Understanding specific details in a text	59	4.49	1.10
R—13. Understanding journal articles	59	4.47	1.12
W—26. Writing long reports (over 15-30 pages)	59	4.47	1.30
L—7. Taking lecture notes	59	4.46	1.18
R—10. Understanding a writer's attitude and purpose	59	4.46	1.25

Language Skills Perceived to be Most/Least Important and Most/Least Difficult

Overall, graduate students in this study rated the importance of the 31 English language-based study skills much higher compared with how they rated the same skills on the perceived difficulty scale. Regarding the importance scale, 24 skills of the 31 were rated above 4 on a 5-point Likert scale, whereas none of the skills was rated above 3 (except one skill at 3.15—*leading class discussions*) in terms of difficulty.

In order to take a closer look at the importance, we divided the 31 language study skills into three subgroups illustrated in three tables (Tables 1, 2, & 3), which show shifts in modes at the various levels of importance. Taking the mean of 4.46 and above as the first break, this leaves us with 14 subskills as shown in Table 1.

In this group, of the skills rated as most important by the NNES graduates, there are two skills in speaking, three in listening, and two in writing, but seven in reading. The next break of the group occurs between 4.38 and 4.02, creating a subgroup of 10 skills, but with a different spread of modes (see Table 2).

Here there is a more even spread, with two in speaking, two in listening reading, and four in writing. This group also differs from the above subgroup as it contains nonacademic skills such as writing résumés and formal letters and filling out forms. It is interesting to note that all these non-academic skills are in writing. The third logical break occurs at and after the mean of 3.81 in Table 3.

As expected, the move from more important to less important is accompanied by a shift from more academic skills to more nonacademic skills,

Table 2
Most to Least Important Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
R—15. Understanding written instructions	59	4.38	1.13
W—29. Writing résumés	59	4.36	1.27
W—27. Writing examinations	59	4.31	1.52
R—17. Understanding course outlines	59	4.27	1.34
S—21. Participating in class discussions	59	4.17	1.44
L—4. Understanding small group discussions	59	4.14	1.02
S—22. Discussing issues with peers in small-group discussions, collaborative projects, or out of class study groups	59	4.10	1.37
W—28. Writing formal letters	59	4.05	1.38
W—31. Filling out applications and forms	59	4.02	1.38
L—3. Understanding classroom interactions	59	4.02	1.17

Table 3
Most to Least Important Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
W—30. Writing e-mail	59	3.81	1.38
R—16. Understanding university calendars	59	3.75	1.36
S—24. Meeting people in social settings	59	3.63	1.40
R—18. Understanding public notices	59	3.53	1.29
L—5. Understanding everyday English outside class	59	3.49	1.36
R—19. Understanding magazines and newspapers	59	3.30	1.42
L—6. Understanding TV, movies and news media	59	3.22	1.33

although reading university calendars and writing e-mails might constitute areas of overlap between the two types of language skills. Although there were 12 reading skills on the questionnaire, compared with seven listening, seven writing, and five speaking, the division of skills into the three areas from most important to least important is the result of the NNES graduate students' own responses. This indicates that for these students, more skills in reading are considerably more important than skills in listening, speaking, and writing. Some listening, speaking, and writing skills—those highly academic-related—are perceived to be more important than others less directly related to their academic studies.

Table 4
Most to Least Difficulty Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
S—23. Leading class discussions	59	3.15	1.53
S—20. Giving talks, seminars or presentations	59	2.97	1.39
W—26. Writing long reports (over 15-30 pages)	59	2.95	1.48
S—21. Participating in class discussions	59	2.68	1.49
W—28. Writing formal letters	59	2.54	1.19
S—22. Discussing issues with peers in small-group discussions, collaborative projects, or out of class study groups	59	2.41	1.52
L—3. Understanding classroom interactions	59	2.41	1.71
W—27. Writing examinations	59	2.39	1.50
W—29. Writing resumes	59	2.39	1.19
S—24. Meeting people in social settings	59	2.36	1.17
W—25. Writing short reports (1-5 pages)	59	2.32	1.43
L—4. Understanding small group discussions	59	2.32	1.68

Table 5
Most to Least Difficulty Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
L—6. Understanding TV, movies and news media	59	2.25	1.03
R—10. Understanding a writer's attitude and purpose	59	2.19	1.67
L—7. Taking lecture notes	59	2.19	1.68
R—14. Understanding research reports	59	2.10	1.59
R—13. Understanding journal articles	59	2.05	0.97
R—19. Understanding magazines and newspapers	59	1.98	0.99
R—9. Understanding specific details in a text	59	1.98	1.33
L—1. Understanding lectures/seminars	59	1.95	1.34

Similarly, dividing the 31 language study skills into three subgroups, based on the different levels of difficulty enables a more detailed picture to show shifts in mode at the various levels of difficulty (see Tables 4, 5, & 6), as rated by the NNES graduates. The first group of 12 skills is based on the break between the mean of 3.15 and 2.32, creating the subgroup shown in Table 4.

Comparing the first *most important* group with this first *most difficult* group, we see three skills appearing in both groups: *Leading class discussions* ranked first on both importance and difficulty scale, *Giving presentations* ranked second most difficult and fifth most important, and *Writing short reports* ranked 11th most difficult and 9th most important. The second *most*

Table 6
Most to Least Difficulty Study Skill

	<i>N</i>	<i>Mean</i>	<i>SD</i>
L—5. Understanding everyday English outside class	59	1.88	1.00
R—12. Understanding academic textbooks	59	1.83	1.57
R—11. Understanding vocabulary in your subject area	59	1.81	1.27
L—2. Understanding instructions of your professors	59	1.80	1.32
R—8. Understanding the main points of a text	59	1.69	1.28
W—31. Filling out applications and forms	59	1.68	0.99
W—30. Writing e-mail	59	1.53	0.75
R—17. Understanding course outlines	59	1.42	1.18
R—15. Understanding written instructions	59	1.39	0.64
R—18. Understanding public notices	59	1.37	0.64
R—16. Understanding university calendars	59	1.27	0.58

difficult group emerges based on the break between 2.25 and 1.95, which creates a subgroup of eight skills in Table 5.

Here only one skill appears in both groups: *Understanding writer's attitude and purpose*. This subgroup makes three skills in listening and five skills in reading ranked as being fairly difficult. The third *most/least difficult* group is based on the break at and after the mean of 1.88, which creates a subgroup of 11 skills shown in Table 6.

Comparing the two lowest groups, that is, least importance and least difficulty, four skills appear in both: *Everyday English*, *E-mail*, *University calendars*, and *Public notices*, indicating that these skills are of relatively little importance to their academic success and relatively easy for these graduate students. It is possible that these four skills, together with *Filling in forms*, are thought to be less difficult because they are less important; however, the reverse is possible, and the skills might be thought of as being less important because they are less difficult. Either way, it seems clear that none of these four skills would need to be included in an EAP program of targeted English-language support at the graduate level, at least not for these students. In contrast, a course including *Leading class discussions*, *Giving presentations*, *Small group discussion*, *Writing long or short reports*, and *Understanding a writer's attitude and purpose* would be attended by most of the 59 graduate students who completed this questionnaire. It is also true that nonacademic-related language skills are probably lower-level, easier-to-achieve skills than specialized and academic-related skills (such as the four skills mentioned above), which required time and acculturation into the subject specialization. Although this kind of simple analysis accounts for only some of the 31 language skills responded to, it could be used to decide where else to target the language support by broadening the inter-group comparison. For example, *Research reports*, *Journal articles*, and *Understanding a writer's attitude and purposes* occur in the first *most important* group and the second *most difficult* group. So a course including these elements, as well as the five given above, would be even more likely to be of use to—and attended by—most of the NNES graduate students.

It would, of course, be simpler to make comparisons if both sets of the 31 language skills were divided into equal numbers. However, it should be the students' responses that dictate where the logical groupings occur in terms of the questionnaire results. It would also be possible to simply number each skill from one to 31 depending on how high or low the mean response was, but with so many possible skills—each of which could form the basis of an entire course in itself—and with many of them getting the same mean score, grouping and comparing the responses in this way is a simple but useful way of targeting support.

The Interviews

Twelve interviews were conducted approximately three months after students completed the questionnaire. The students interviewed were graduate students at the university who had already filled out the questionnaire and were at various stages of their academic program. There were six men and six women: five from East Asia, one from India, five from Eastern Europe, and one from Greece. In the interviews, linguistic challenges in listening, reading, speaking, and writing were explored in more depth.

Although reading is a critical skill and considered one of the most important skills for achieving academic success, only a few students felt that they had difficulties understanding what they were reading unless they had changed their major and were less familiar with the subject matter of their new courses. However, many students mentioned that they read slowly and that it was time-consuming to look up new words in the dictionary such as discipline-specific terminology. Although they developed strategies to cope with the amount of reading material, they also realized that they could be more selective about what they needed to read for their courses. One student developed her own strategy to deal with the amount of reading, which included not reading as much as she initially intended:

I need to read more than once to get the main point and the vocabulary is more difficult. If I need to check the dictionary all the time, I cannot finish the reading before the class so that's difficult to read. The sooner or later, you just get used to it. You actually increase your speed more and more ... You develop some skills. Like you just skip whatever you don't know and then I borrow books from my classmates who already underline, highlight some main points. I just read ... Or just forget about reading anyway. Canadian students didn't actually read as much as I did.

Students felt that reading for leisure would not help them learn more colloquial vocabulary, but this was probably related to time constraints. The students we interviewed showed little interest in reading Canadian newspapers or magazines. Even when they did read them, it was primarily to look for information such as movie times at the local theaters. Writing was perceived by most students to be the most challenging skill, which corresponds with the survey results on the difficulty scale. Some students mentioned that they did not know how to write academic texts. They tended to avoid writing complete sentences because of their limited knowledge of language structure, or they found it difficult to be concise because of their lack of vocabulary. One student commented,

There is a format so you just follow the format, thesis statement and then everything. Usually I can know my own mistakes if I look at the ar-

ticle again, after I write it, like one week later. I think the difficulty is vocabulary. I cannot describe things in a concise way, like other people might use one sentence to describe one thing and I might use three sentences [in] the same situation. And vocabulary. I don't have enough vocabulary but I think it is enough to express myself. Just you need to use some similar terms or search for those specific terms. Grammar. I always think my grammar is not good.

Some students tended to produce short and simple texts when writing an exam for the sake of being safe, but they felt less confident about being able to elaborate on their ideas. Many students used models of writing from journal articles or textbooks to help them structure and incorporate various expressions and sentence patterns into their own papers. Another student developed his own strategies:

I knew that my English is not good ... when I was writing my essay, I use the papers, some scientific papers and I use the expression from there and I put it in my essay so I didn't change too much or, you know, connect it to phrases but with a *but* or *and* or *so* or something like this, but I didn't change too much. So I didn't make something my own using my words.

Some students also wrote in their first language while they drafted their texts because such a process seemed to help them formulate and structure ideas. However, they were conscious that the translating process could interfere with the natural flow of English structures due to the transfer from their native languages. With regard to editing, most students received help from their supervisors because of their expertise in both linguistic and academic knowledge. In addition, they also asked colleagues or friends to proofread their work and help them with grammar problems. It was also interesting to note that the colleagues they referred to were sometimes non-native speakers of English as well. Many students stated that they were reluctant to seek help from their English-speaking Canadian classmates because they did not have a close enough relationship with these students to ask them to edit and correct their work. Listening often improves significantly over time. Some students we interviewed reported difficulty in understanding lectures or their professors' instructions because they lacked knowledge in the subject area or they could not understand their professors' speech, especially if some were NNES as well. In addition, some students mentioned getting tired from trying to understand every word of the instructions. The listening strategies the students employed included: taking notes and asking the professor to clarify any ambiguities; tape-recording the lecture; and borrowing notes from classmates. For example, a student commented,

when teacher gives lectures, you need to listen very carefully. You can easily be distracted because it is not your first language. You need to concentrate very hard and I used a tape recorder at first but I find to listen to them is just too boring, so I just borrow the notes and copy the notes or discuss with students after the course—what did they hear in the course. I think at the beginning I can catch around 50% of the lecture and the major difficulty comes later when you need to hand in your papers and you need to do the exams.

The difficulty in listening tended to reduce substantially when students acquired more subject area knowledge and became more accustomed to the style of teaching and the academic setting. However, most students we interviewed found it difficult to follow the speech of their native English-speaking Canadian classmates because many spoke quickly and used many colloquialisms. They also mentioned that they had a difficult time understanding the content of television programs (or movies), which might be the result of a combination of reasons such as cultural differences, lack of background and contextual knowledge, and lack of English-language proficiency. Some mentioned watching TV or movies as a way of improving their listening skills.

In terms of speaking skills, giving presentations was identified by these NNES graduates as being the most difficult, which is also a skill perceived by them to be both important and difficult in the survey. A student described her experience when she first arrived.

[I was only here for two months] and we have a presentation and I was really scared because I can't speak loud in public. That's very difficult for me and one of my friends helped me to prepare all the materials and he let me practice all the time ... practice ... for five hours a day. And now I speak loud in public. That was my first time. It was very difficult. It was a good experience for me, like I did several presentations for all the courses and I'm also a teaching assistant and how to speak a loud in public to undergraduate students. And ah, last month I complete my thesis defense. That is a chance for me to speak a loud in public. So I'm still nervous and scared.

Students from various cultures use particular strategies to help them prepare for presentations such as rehearsing, memorizing, and modeling. During the presentation, some students use humor and visual aids to cope with language difficulties. Although many students felt that giving presentations was a challenging task at the beginning of their studies, they also talked about the progress they made and how they gained confidence in their own performance after practicing. However, with regard to participating in classroom discussions, many students still felt inadequate when responding to questions and expressing themselves clearly in class. One student expressed

her desire to talk like a native speaker and her fear of making grammatical mistakes.

As to my English language, actually, although I don't find any difficulties in communicating, like participating and listening to the lectures, but I do find I do not improve my spoken English at all and I also find my English, although I do not have any difficulties, I mean my English level, still stay there, like generally speaking the language proficiency do not improve at all. It just stay there ... As for spoken English, although I can express myself clear, I can make myself understood but I still, I do believe my language is still a bit kind of, how to say, not that proper. Like if ... I want to use the proper English there is still some difficulties there. It's not that really like native speakers, there is still a long distance.

Most of the participants were also self-conscious about their foreign accents and concerned about their pronunciation, especially when they tutored undergraduate students as teaching assistants. Another student commented,

Oh. Really I think my English was so bad. My students they couldn't understand maybe any words because my pronunciation was so bad from my first TA experience. I think because I know the vocabulary but I don't know how to pronounce exactly and some words were pronounced by me in a very bad manner. And I think they were too shy to tell me and I ask them "Please tell me if you don't understand, stop me and ask me" ... I was talking maybe about one hour and I ask "Did you understand?" and they told me "No." And I started to do some slides, some overheads and during the time I was speaking I put on the overheads and after that it was really very well and my English, I improved my English pronunciation and at the end it was very good.

Although the NNES graduate students tended to become frustrated and discouraged with their speaking skills, most felt that these skills improved over time when they were well into their academic studies.

Conclusion

Based on a combination of the survey and follow-up interviews, this study was designed in part to contribute to the relatively small body of knowledge so far built up on the linguistic and cultural experiences of NNES graduate students at Canadian universities and to enable those students to report on their experiences in their own words. Relating our findings to those of earlier studies, our results support the conclusions of some these fairly well. The findings of studies by Blue (1990), Burke and Wyatt-Smith (1996), and others that graduate students reported more difficulties with writing than other skills are partially supported by the graduate students' reports in this study,

as writing tasks, along with speaking, were identified most commonly in the *most difficult* group. This also supports the findings of studies by Sun (1987), Berman and Cheng (2001), and Chacon (1998). Through the interviews with the NNES graduate students in this study, it became apparent that most students developed and employed a variety of strategies to tackle their language difficulties. These included continual practicing of class presentations and using existing models and structures from textbooks and academic journals to help them with their writing. Although these NNES graduates felt that their English-language skills had improved over time, some indicated their frustration in coping with both language and academic demands simultaneously in their academic studies. In addition, these students felt that their improvement was not rapid enough in the limited time they had to complete their degrees.

The findings indicate that many NNES graduate students still need continual targeted language support even after they are admitted into the graduate programs. The support could focus on those skills that they feel are both important and difficult. In order to do this, a closer collaboration between EAP program(s) on campus, academic departments, graduate students, and their professors should be encouraged. For example, students could be offered specialized EAP oral presentation and writing courses. Through the Office of English Language and Writing Support at her university, Freeman (2003) describes the popularity of the six-week, noncredit oral courses for first-year NNES graduate students in engineering, which focus on pronunciation, listening strategies, and academic conversation skills. Opportunities could also be available for students to take a pre-enrollment course with content-based instruction or a bridging program (Cargill, 1996). Students could be encouraged to participate in social conversation groups with native English-speakers in order to enhance their ability to speak English and to become more acquainted with the academic and cultural environment of the university and the local community. These conversation groups could take place in international centers or other venues outside of the regular classroom context. Topics for conversation could be found from reading newspapers, an effective resource for enhancing both vocabulary development and cultural capital often overlooked by NNES students in our study.

We recognize from interviewing the graduate students, however, that time and financial constraints (only a small number of departments can support graduate students in EAP support at the university where we conducted our study) are the two main reasons that have prevented them from making fuller use of existing EAP support on campus. This is a situation Canadian universities must be made more aware of when they are offering admission, especially to international students on scholarships. Freeman (2003) argues that it is important for faculty to recognize these constraints and provide courses that are flexible and hence complement their respective

programs. She suggests that language support could be offered as part of a noncredit course parallel to content courses; as part of a tutorial connected to a content course; and as part of a mandatory content course team-taught by academic and school of English faculty. Our study also revealed that social-cultural adjustment to a new academic and learning environment is equally important to academic success (see also Myles & Cheng, 2003).

Similarly, in their qualitative study of international students at an Australian university, Harding and Kidd (2000) identified language as well as sociocultural differences and unfamiliarity with teaching methodologies as prime factors contributing to weak academic performance. Indeed, with a greater emphasis on internationalizing Canadian campuses, we need to conduct more research in the form of longitudinal case studies of international students, comparative research with Canadian students, and ethnographies in order to gain a fuller understanding of the linguistic and cultural challenges faced by NNES graduate students and the pressures they feel in their academic pursuits. In this way, we will be able to provide effective support for the increasing number of such students on our campuses in all Canadian universities.

Acknowledgments

We acknowledge the contribution of funding from the Social Sciences and Humanities Research Council of Canada through Queen's University's internal PDF/ARC funding program. We would like to thank Jun Qian and Yang Dong for their contribution to the data collection for this study.

The Authors

Liying Cheng (PhD) is an assistant professor in teaching English as a second/foreign language in the Faculty of Education, Queen's University. She has conducted research in teaching English for academic purposes in a number of universities in the United Kingdom and Canada. Her articles have been published in *Issues in Applied Linguistics*, *the Canadian Journal of Applied Linguistics*, and the *Journal of English for Academic Purposes*.

Johanna Myles is a doctoral candidate in the Faculty of Education, Queen's University. She has taught courses in English for academic purposes both in Canada and abroad for over 20 years. Her main research interests are in intercultural communication issues, second language writing, and curriculum design.

Andy Curtis (PhD) is the Director of the School of English at Queen's University. Until recently he was a Visiting Professor in the Department of Language Teacher Education in the School for International Training (SIT) in Vermont, and the Director of the Effective English for Postgraduate Research Students (EEPRS) program in the Hong Kong Polytechnic University.

References

- Benesch, S. (1996). Needs analysis and curriculum development in EAP: An example of a critical approach. *TESOL Quarterly*, 30, 723-738.
- Berman, R., & Cheng, L. (2001). English academic language skills: Perceived difficulties by undergraduate and graduate students, and their academic achievement. *Canadian Journal of Applied Linguistics*, 4, 25-40.

- Bers, T. (1994). English proficiency, course patterns, and academic achievements of limited-English-proficiency community college students. *Research in Higher Education*, 35, 209-234.
- Blue, G. (1990). *Language learning within academic constraints*. (ERIC Document Reproduction Service No. ED 390298)
- Braine, G. (1995). Writing in the natural sciences and engineering. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 113-133). Norwood, NJ: Ablex.
- Bridgeman, B., & Carlson, S. (1984). Survey of academic writing tasks. *Written Communication*, 1, 247-280.
- Burke, E., & Wyatt-Smith, C. (1996). *Academic and non-academic difficulties: Perceptions of graduate non-English speaking background students* [electronic database] TESL—EJ, 2, Available: <http://www-writing.berkeley.edu/TESL-EJ/ej05/al.html>
- Cargill, M. (1996). An integrated bridging program for international postgraduate students. *Higher Education Research and Development*, 15, 177-188.
- Casanave, C.P. (2002). *Writing games: Multicultural case studies of academic literacy practices in higher education*. Mahwah, NJ: Erlbaum.
- Casanave, C., & Hubbard, P. (1992). The writing assignments and writing problems of doctoral students: Faculty perceptions, pedagogical issues, and needed research. *English for Specific Purposes*, 11, 33-49.
- Chacon, E. (1998). *Survey of international students at the University of Alberta*. Unpublished research report. Edmonton, AB: University of Alberta.
- Cheng, L. (1996). What do foreign language learners do in their EAP reading? *Issues in Applied Linguistics*, 7, 279-296.
- Eblen, C. (1983). Writing across the curriculum: A survey of university faculty's views and classroom practices. *Research in the Teaching of English*, 17, 343-348.
- Ferris, D., & Tagg, T. (1996a). Academic oral communication needs of EAP learners: What subject-matter instructors actually require. *TESOL Quarterly*, 30, 31-58.
- Ferris, D., & Tagg, T. (1996b). Academic listening/speaking tasks for ESL students: Problems, suggestions, and implications. *TESOL Quarterly*, 30(2), 297-320.
- Flowerdew, J., & Peacock, M. (2001). The EAP curriculum: Issues, methods, and challenges. In J. Flowerdew & M. Peacock (Eds.), *Research perspectives on English for academic purposes* (pp. 177-194). Cambridge, UK: Cambridge University Press.
- Freeman, J. (2003). The science of conversation: Training in dialogue for NNS in engineering. *IEEE Transactions on Professional Communication*, 46(3), 157-167
- Frodesen, J. (1995). Negotiating the syllabus: A learner-centered, interactive approach to ESL graduate writing course design. In D. Belcher & G. Braine (Eds.), *Academic writing in a second language: Essays on research and pedagogy* (pp. 331-350). Norwood, NJ: Ablex.
- Graham, J.G. (1987). English language proficiency and the prediction of academic success. *TESOL Quarterly*, 21, 505-521.
- Guen, R. (2000). Life after the pre-session course: How students fare in their departments. In G. Blue, J. Milton & J. Saville (Eds.), *Assessing English for academic purposes* (pp. 131-145). Bern, Switzerland: Peter Lang.
- Harding, W., & Kidd, B. (2000, August). *Difference and performance: developing effective strategies to improve the performance of international students in a self managed learning environment*. Paper presented at the 14th Australian International Education Conference, Brisbane.
- Hartill, J. (2000). Assessing postgraduates in the real world. In G. Blue, J. Milton & J. Saville (Eds.), *Assessing English for academic purposes* (pp. 117-130). Bern, Switzerland: Peter Lang.
- Heikinheimo, P., & Shute, J. (1986). The adaptation of foreign students: Students views and institutional implications. *Journal of College Student Personnel*, 27, 399-406.
- Herrington, A. (1985). Writing in academic settings: A study of the contexts for writing in two college chemical engineering courses. *Research in the Teaching of English*, 19, 331-359.

- Holliday, A. (1995). Assessing language needs within an institutional context: An ethnographic approach. *English for Specific Purposes*, 14, 115-126.
- Horowitz, D. (1986). What professors actually require: Academic tasks for the ESL classroom. *TESOL Quarterly*, 20, 445-462.
- Hutchinson, T., & Waters, A. (1987). *English for specific purposes: A learning-centered approach*. Cambridge, UK: Cambridge University Press.
- Johns, A., & Price-Machado, D. (2001). English for specific purposes: Tailoring courses to student needs—and to the outside world. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (3rd ed., pp. 43-54). Boston, MA: Heinle & Heinle.
- Johns, A. (1981). Necessary English: A faculty survey. *TESOL Quarterly*, 15, 51-57.
- Jordan, R. (1997). *English for academic purposes: A guide and resource book for teachers*. Cambridge, UK: Cambridge University Press.
- May, M., & Bartlett, A. (1995). "They've got a problem with English": Perceptions of the difficulties of international post-graduate students. (ERIC Document Reproduction Service ED 390298)
- McKenna, E. (1987). Preparing students to enter discourse communities in the U.S. *English for Specific Purposes*, 6, 187-202.
- Myles, J., & Cheng, L. (2003). The social and cultural life of non-native English speaking international graduate students at a Canadian university. *Journal of English for Academic Purposes*, 2, 247-263.
- Patkowski, M., L. Fox., & I. Smodlaka. (1997). Grades of ESL and non-ESL students in selected courses in ten CUNY colleges. *College ESL*, 7(1), 1-13.
- Patton, M. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Prior, P. (1998). *Writing/disciplinarity: A sociohistoric account of literate activity in the academy*. Mahwah, NJ: Erlbaum.
- Ramsey, S., Barker, M. & Jones, E. (1999). Academic adjustment and learning processes: A comparison of international and local students in first-year university. *Higher Education Research and Development*, 18, 129-144.
- Rose, M. (1983). Remedial writing courses: A critique and a proposal. *College English*, 45, 109-126.
- Samuelowicz, K. (1987). Learning problems of overseas students: Two sides of a story. *Higher Education Research and Development*, 6, 121-134.
- Stoller, F. (2001). The curriculum renewal process in English for academic purposes programmes. In J. Flowerdew & M. Peacock (Eds.), *Research perspectives on English for academic purposes* (pp. 208-224). Cambridge, UK: Cambridge University Press.
- Sun, Y. (1987). An EFL needs assessment: Chinese students at a Canadian university. *TESL Canada Journal*, 1, 27-44.
- Tarone, E. (1989). Teacher-executed needs assessment: Some suggestions for teachers and program administrators. *MinnTESOL Journal*, 7, 39-48.
- Trice, J. (1999, March). *Multiple perspectives on academic writing needs*. Paper presented at the Annual Meeting of the Teachers of English to Speakers of Other Languages, New York.
- Vinke, A., & Jochems, W. (1993). English proficiency and academic success in international postgraduate education. *Higher Education*, 26, 275-285.
- Xu, M. (1991). The impact of English-language proficiency on international graduate students' perceived academic difficulty. *Research in Higher Education*, 32, 557-570.
- Zhao, C. (1993). *Perceived English language needs of international graduate students at the University of Alberta*. Unpublished master's thesis, University of Alberta.
- Zimmermann, S. (1995). Communication competence and international student adaptation to an American campus. *Communication Education*, 44, 321-335.

Appendix

Student Survey: Academic Studies at XX University

Part One Your language skills in academic studies

Please write 1 to 5 in each row to indicate how **important** conducting the following activities in English is to your success as a graduate student at XX University, and how **difficult** you find these activities in your academic study at XX University.

1	2	3	4	5		1	2	3	4	5
↓		↓		↓		↓		↓		↓
Not important		Somewhat important		Very important		Not difficult		Somewhat difficult		Very difficult

Importance					Difficulty				
1	2	3	4	5	1	2	3	4	5
Listening									
Reading									

Importance					Difficulty				
1	2	3	4	5					
Speaking									
					20. Giving talks, seminars or presentations				
					21. Participating in class discussions				
					22. Discussing issues with peers in small-group discussions, collaborative projects, or out of class study groups				
					23. Leading class discussions				
					24. Meeting people in social settings				
Writing									
					25. Writing short reports (1-5 pages)				
					26. Writing long reports (over 15-30 pages)				
					27. Writing examinations				
					28. Writing formal letters				
					29. Writing resumes				
					30. Writing e-mail				
					31. Filling out applications and forms				

Part Two Demographic information

Please mark the appropriate box.

1. You are ☐ 1 Male ☐ 2 Female
2. The total length of time you have spent in English speaking countries as of February 2001. Refer to less than 1 year as 1 year (i.e., 2 years and 5 months = 3 years)
 _____ Years
3. Your faculty and department; or your Division of the School of Graduate Studies, i.e. Life Sciences, Humanities, Engineering and Applied sciences, Mathematics & Physical Sciences and Social Sciences and Professional Schools.

4. Your first language

5. Are you a TA ____; or a RA ____; or both a TA and a RA ____; or

neither a TA nor a RA _____ at XX University?

6. If yes, what are some of the most challenging language skills such as the ones you just rated above that you have encountered in your work as a TA or a RA?

Please specify _____

7. For your academic success at XX University, do you need further language support?

Yes _____ No _____

8. If yes, what kind of language support would you prefer?

Please specify _____

9. If so, would you be able to pay for such language support?

Yes _____ No _____

*[Questions 5-9 are not reported in this paper due to length constraint].

Thank you very much for completing this questionnaire

1. Please indicate whether you would like to participate in the follow-up interviews:

Yes _____ No _____

2. What is the best way for us to contact you about this?

Your name _____

Your e-mail address _____

Your phone _____